DOCUMENT RESUME

ED 327 629 UD 027 894

AUTHOR Nechworth, John; And Others
TITLE Chapter 1 Instructional Program Final Report 1989/90.
INSTITUTION Houston Independent School District, TX. Dept. of Research and Evaluation.
PUB DATE 90
NOTE 24p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; Analysis of Covariance; Bilingual Education; *Compensatory Education; Economically Disadvantaged; *Educationally Disadvantaged; Elementary Education; English (Second Language); Limited English Speaking; Program Evaluation; Program Implementation; *Remedial Programs; *Supplementary Education
IDENTIFIERS *Education Consolidation Improvement Act Chapter 1; *Houston Independent School District TX

ABSTRACT

This report examines the impact of instructional programs funded under Chapter 1 of the Education Consolidation and Improvement Act on the academic achievement of students served in the Houston (Texas) Independent School District during the 1989-90 school year. The Chapter 1 programs provided supplemental remedial instruction in reading/language arts, mathematics, English as a second language (ESL), and bilingual education for elementary school pupils who are economically and educationally disadvantaged. Instruction was provided through either a reach-in model or a regroup model, or through a combination of these approaches; in addition, extended-day classes were available on several campuses. The specific tasks for this inquiry were the following: (1) to describe Chapter 1 instructional programs as implemented within schoolwide and nonschoolwide instructional models; (2) to compare the impact of schoolwide and nonschoolwide approaches on reading/language arts instruction; (3) to compare the impact of schoolwide and nonschoolwide approaches on mathematics instruction; and (4) to evaluate the impact of Chapter 1 instruction on individual students by determining the number of students who moved closer to the non-Chapter 1 population on measures of academic achievement. Eight research questions are addressed and three recommendations offered. Statistical data are presented in 10 tables. (AF)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED327629

Chapter 1 Instructional Program
Final Report 1989/90

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

K. Sanchez
H.I.S.D.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Houston Independent School District
Department of Research & Evaluation

Nechworth, John, M.S.
Cisneros, Elda, M.A.
Sanchez, Kathryn S., Ed.D.

UD027894

HISD

Joan M. Raymond
General Superintendent

Executive Summary

Chapter 1 Instructional Program

Final Report 1989-90

Program Description

The Chapter 1 program provided supplemental remedial instruction in reading/language arts, mathematics, English as a Second Language (ESL) and bilingual education for elementary school pupils who are economically and educationally disadvantaged. Instruction was provided through either a reach-in model, a regroup model, or a combination of both approaches. In addition, Extended Day classes were available at several campuses.

There were 110 Chapter 1 schools within the district during the 1989-90 school year. Of these, 42 were designated as Schoolwide campuses while the other 68 were designated as non Schoolwide campuses. At the non Schoolwide schools, only those students (grades 1 through 5) meeting eligibility criteria based on standardized test scores were eligible for services. At the Schoolwide schools, all students were eligible for services.

Funding

The Chapter 1 instructional programs cost $14,637,024, which was 74.1% of total Chapter 1 expenditures for instructional programs.

Evaluation Objectives

This investigation was designed to provide answers for the following research questions:

Research Question 1: What was the performance of the Chapter 1 LEP students on the spring, 1990 administration of the Spanish Assessment of Basic Education (SABE)?

- The Chapter 1 second grade LEP students achieved a mean NCE score above grade level on the SABE Total Math subtest .

Research Question 2: What was the performance of the Chapter 1 non-LEP students on the spring, 1990 administration of the Metropolitan Achievement Tests-6 (MAT-6)?

- All of the mean NCE scores on the MAT-6 subtests fell below grade level. Overall, scores were somewhat higher for the mathematics subtests. This is consistent with past findings.

Research Question 3: Were there differences between the Schoolwide non-LEP students and the non Schoolwide, non-LEP students in their MAT-6 reading and mathematics scores at grade levels 2 through 6?

- On the MAT-6 reading subtests, the only significant differences were found at the second grade for both the Reading Total and Reading Comprehension subtests. The adjusted means for the non-Schoolwide schools were higher than those achieved at the Schoolwide schools.

  On the MAT-6 Mathematics Total subtest, the adjusted means for the non-Schoolwide schools were significantly higher at grades two and four, as well as for the comparison between the schools across grade levels. On the MAT-6 Math Problem Solving subtest, the adjusted means for the non-Schoolwide schools were significantly higher at the second grade and for the comparison between the schools across grade levels.

Research Question 4: Were there differences between the Schoolwide LEP students and the non Schoolwide LEP students in their SABE reading and mathematics scores at grade levels 2 through 5?

- On the SABE reading subtests, no significant differences were found between the adjusted means for the Schoolwide and non-Schoolwide schools.

  On the SABE Mathematics Total subtest, no significant differences were found between the adjusted means for the Schoolwide and non-Schoolwide schools at grades two through five. The adjusted mean across grade level for the non-Schoolwide schools was significantly higher than the adjusted mean for the Schoolwide schools. On the SABE Math Concepts and Applications subtest, the adjusted means for the non-Schoolwide schools were significantly higher at the second and fourth grades, and also across grade levels.

Research Question 5: What were the mean NCE gain scores in reading and mathematics for the non-LEP Chapter 1 students?

- The Chapter 1 non-LEP students attained mean NCE gain scores which were greater than zero on all but the third grade Reading Total and Reading Comprehension subtests of the MAT-6.

Research Question 6: What were the mean NCE gain scores in reading and mathematics for the LEP Chapter 1 students?

- The Chapter 1 LEP students attained mean NCE gain scores which were greater than zero on all but the fourth grade Reading Total subtest of the SABE.

Research Question 7: What percentage of non-LEP Chapter 1 students attained an NCE gain score greater than zero on the reading and mathematics subtests of the MAT-6?

- Except for both of the reading tests at the third grade level, at least 50% of the Chapter 1 non-LEP students attained gain scores greater than zero on the MAT-6 subtests. For a student below grade level, a positive gain score indicates movement toward or even beyond the mean of the normative group for the norm-referenced test.

Research Question 8: What percentage of LEP Chapter 1 students attained an NCE gain score greater than zero on the reading and mathematics subtests of the SABE?

- At least 50% of the Chapter 1 LEP students attained gain scores greater than zero on the SABE subtests at all grade levels.

Method

Evaluation of the first two research questions was based on the MAT-6 and SABE scores for the 1989-90 school year. The means for reading and mathematics subtests, by grade level, for program participants were determined.

Research questions three and four present comparisons between the Chapter 1 Schoolwide and non Schoolwide programs. Reading and mathematics subtests from the MAT-6 and SABE were compared by means of Analysis of Covariance (ANCOVA). This method allows for a degree of statistical control by adjusting the student post test scores for their pretest results. This adjustment statistically places the students at the same "starting point" and allows for a comparison which provides a measure of change which is more valid than comparisons between scores which lack such control.

The remaining research questions were based on gain scores, which are the scores obtained when pretest scores (from spring, 1989) are subtracted from posttest scores (from spring, 1990). Mean gain scores, by grade level, were determined for the reading and mathematics subtests of the MAT-6 and SABE. In addition, the percentages of students showing an overall gain on each subtest, from spring, 1989 to spring, 1990, were calculated.

Recommendations

The following recommendations were offered:

- The gain scores analyses indicate that, overall, the Chapter 1 program has been successful in helping academically disadvantaged students to "close the gap" between themselves and the non-Chapter 1 student population. The use of TEA Improvement Plan data for individual schools will help to produce changes at those schools where test score gains lag behind the Chapter 1 program as a whole.
- The comparison of the Schoolwide and non-Schoolwide programs indicate that the Schoolwide approach was no more effective than the non-Schoolwide approach. The 1989-90 school year was the first year in which the Schoolwide approach was implemented in HISD. It is recommended that the individual campus plans be reviewed and modified to incorporate evaluation findings from the 1989-90 academic year.
- It is recommended that Service Roster development and collection procedures be modified to lower the error rate and to simplify the record keeping duties of school personnel.

DESIGN OF THE INQUIRY

The purpose of this inquiry was to examine the impact of the Chapter 1 Instructional programs on the academic achievement of students served during the 1989-90 school year.

The specific tasks for this inquiry were:

- To describe the Chapter 1 instructional program as implemented within the Schoolwide and non-Schoolwide instructional models.
- To compare the impact of the Schoolwide and non-Schoolwide approaches on reading/language arts instruction.
- To compare the impact of the Schoolwide and non-Schoolwide approaches on mathematics instruction.
- To evaluate the impact of Chapter 1 instruction on individual students by determining the numbers of students who moved closer to the non-Chapter 1 population on measures of academic achievement.

This investigation was designed to provide answers to the following research questions:

Research Question 1: What was the performance of the Chapter 1 LEP students on the spring, 1990 administration of the Spanish Assessment of Basic Education (SABE)?

Research Question 2: What was the performance of the Chapter 1 non-LEP students on the spring, 1990 administration of the Metropolitan Achievement Tests-6 (MAT-6)?

Research Question 3: Were there differences between the Schoolwide non-LEP students and the non-Schoolwide, non-LEP students in their MAT-6 reading and mathematics scores at grade levels 2 through 5?

Research Question 4: Were there differences between the Schoolwide LEP students and the non-Schoolwide LEP students in their SABE reading and mathematics scores at grade levels 2 through 5?

DESIGN OF THE INQUIRY (continued)

Research Question 5: What were the mean NCE gain scores in reading and mathematics for the non-LEP Chapter 1 students?

Research Question 6: What were the mean NCE gain scores in reading and mathematics for the LEP Chapter 1 students?

Research Question 7: What percentage of non-LEP Chapter 1 students attained an NCE gain score greater than zero on the reading and mathematics subtests of the MAT-6?

Research Question 8: What percentage of LEP Chapter 1 students attained an NCE gain score greater than zero on the reading and mathematics subtests of the SABE?

MOTIVATION FOR CONDUCTING THIS STUDY

Why was this study conducted?

This investigation was conducted for the following reasons:

Federal Requirements: This report presents information collected during the 1989-90 school year as mandated by Federal guidelines. The Education Consolidation and Improvement Act of 1981 (ECIA) established the Chapter 1 program to provide supplemental remedial instruction in reading/language arts, mathematics, English as a Second Language (ESL) and bilingual education for pupils who are economically and educationally disadvantaged.

Benefits to Houston ISD: Information in this report will benefit HISD by providing achievement information which will be used in concert with the process reports and the TEA Improvement Plan analysis to develop the Chapter 1 instructional program for the 1990-91 school year.

PROGRAM DESCRIPTION

What services were offered through the Chapter 1 instructional program during the 1989-90 school year?

There were 110 Chapter 1 schools within the district during the 1989-90 school year. Of these, 42 were designated as Schoolwide campuses while the other 68 were designated as non-Schoolwide campuses. The following norm-referenced tests were used for program evaluation and for the placement of students into Chapter 1 programs at non-Schoolwide schools.

- The Boehm-R - first grade students
- The Metropolitan Achievement Test (MAT-6) - non-LEP students in grades 2 - 5
- The Spanish Assessment of Basic Education (SABE) - Spanish speaking LEP students in grades 2 - 5
- The California Achievement Test (CAT) - students lacking other standardized achievement test scores

The following describes the Chapter 1 instructional program as it was being implemented during the 1989-90 school year:

Non-Schoolwide Campuses: At the non-Schoolwide campuses, instructional services were provided to Chapter 1 eligible students in grades 1 through 5. In order for a student at one of these schools to be eligible for a Chapter 1 remedial program, the student had to meet placement criteria on an acceptable standardized test. LEP students also had to be recommended by the Language Proficiency Assessment Committee (LPAC) at their school. Students who had been retained at the end of the preceding year were eligible for Chapter 1 remediation upon the recommendation of the Promotion/Retention Committee at their school.

Schoolwide Campuses: At the Schoolwide campuses, all students were eligible for Chapter 1 services. However, students were still identified and tested for evaluation purposes.

Instruction was provided through either a reach-in model, a regroup model, or a combination of both approaches. In addition, Extended Day classes were available at several campuses.

Reach-In Model: At Schoolwide campuses, instructional personnel went into the classroom to work with students along with the foundation teacher. The Schoolwide Chapter 1 teacher could either deliver direct instruction or work with reteaching and extension activities, while the aide worked under the Chapter 1 teacher or foundation teacher on reteaching, reinforcement, and enrichment activities. At non-Schoolwide campuses, the foundation teacher delivered direct instruction while the Chapter 1 teachers and aides provided supplementary instruction to the Chapter 1 eligible students.

Regroup Model: At Schoolwide campuses, additional Chapter 1 teachers lowered the pupil/teacher ratio while the aides provided reteaching/enrichment activities for selected groups of students. At the non-Schoolwide campuses, Chapter 1 instructional personnel provided supplemental instruction to groups of Chapter 1 eligible students.

Extended-Day On-Campus: The Extended-Day On-Campus program provided an additional period of instruction for eligible Chapter 1 students at the end of the regular school day. Depending on the needs of the students, instruction was provided in either reading, mathematics, or ESL. This program was available at 22 schools.

Extended-Day Off-Campus: The Extended-Day Off-Campus program provided an additional period of instruction for eligible Chapter 1 students at the end of the regular school day. Students from Blackshear were brought to the Cuney Homes Center while students from Bruce were brought to the Fifth Ward Multi-Service Center. At Cuney Homes, instruction was provided by four teachers: at Fifth Ward, instruction was provided by six teachers. Depending on the needs of the students, instruction was provided in either reading or mathematics. At both sites, emphasis was placed on reading and writing.

Number Served & Co[illegible] Chapter 1 instructional programs cost $14,637,024, which was 74.1% of tot[illegible]r 1 expenditures ($19,749,761) for instructional programs. These budget figures are approximations based on the current balance ledger issued on 5/31/90 and the Third Amendment to the Chapter 1 Budget.

METHODS

How was this study conducted?

The students involved in this study were:

Chapter 1 Student Population: The Chapter 1 Program was implemented on the 110 campuses with the highest percentages of students in the free and reduced lunch program. In order for a student at one of these schools to be eligible for a Chapter 1 remedial program, the student had to meet placement criteria on an acceptable standardized test. LEP students also had to be recommended by the Language Proficiency Assessment Committee (LPAC) at their school. Students who had been retained at the end of the preceding year were eligible for Chapter 1 remediation upon the recommendation of the Promotion/Retention Committee at their school. At the Schoolwide schools, all students are eligible for Chapter 1 services.

The following norm-referenced tests were used to place students into Chapter 1 programs.

- The Boehm-R - first grade students
- The Metropolitan Achievement Test (MAT-6) - non-LEP students in grades 2 - 5
- The Spanish Assessment of Basic Education (SABE) - Spanish speaking LEP students in grades 2 - 5
- The California Achievement Test (CAT) - students lacking other standardized achievement test scores

LEP students who were instructed primarily or entirely in English took the MAT-6 .

Chapter 1 Evaluation Sample: Chapter 1 students at the non-Schoolwide schools who were eligible based upon their test scores in reading or mathematics and who were reported as being enrolled in a Chapter 1 instructional program were included in the evaluation sample. For evaluation purposes, only those students at the Schoolwide schools who would have been eligible for Chapter 1 services on the basis of test scores had they been enrolled in the non-Schoolwide schools were included in the evaluation sample. However, only students with MAT-6 scores for spring, 1989 and spring, 1990 were included in the matched case sample. Students who were retained the previous year were also included. Because of difficulties with the procedures used in building the Chapter 1 data base, eligibility score information for the first grade was incomplete. For this reason, first grade mean scores for the spring, 1990 testing will not be presented.

The results of this evaluation will be reported in the following section and will be based upon gain scores.

Tests: From the MAT-6, the Reading Total, Reading Comprehension, Math Total, and Math Problem Solving subtests will be used. From the SABE, the Total Reading, Reading Comprehension, Total Mathematics, and Math Concepts and Applications subtests will be used.

Evaluation: This report will present, by grade level, comparisons between the Schoolwide and non-Schoolwide programs. For these comparisons, reading and math subtest scores will be compared for non-LEP (MAT-6) and LEP (SABE) student populations. Comparisons will be carried out by means of Analysis of Covariance (ANCOVA). This method allows for a degree of statistical control by adjusting the student post test scores for their pretest results. This adjustment statistically places the students at the same "starting point" and allows for a comparison which provides a measure of change which is more valid than comparisons between scores which lack such control. The adjusted means and the results of the ANCOVA will be presented in the results section.

Gain Scores Analysis: A gain score is the difference, in normal curve equivalents (NCE's), between a score obtained by a student at the end of the 1988-89 school year and that student's score at the end of the 1989-90 school year. For a student below grade level, a positive gain score indicates movement toward or even beyond the mean of the normative group for the norm-referenced test. A gain score of zero means that a student maintained his or her level of academic achievement relative to the normative group. Federal and Texas Education Agency (TEA) evaluation requirements call for the evaluation of Chapter 1 programs through the analysis of NCE gain scores. This report presents the mean NCE gain scores and the percentages of students with gain scores greater than zero, by reading and mathematics subtests, for the non-LEP and LEP Chapter 1 students.

RESEARCH QUESTION 1

What was the performance of the Chapter 1 LEP students on the spring, 1990 administration of the Spanish Assessment of Basic Education (SABE)?

LEP Students Mean NCE Scores
SABE Reading and Mathematics

Subject		Grade Level 2	3	4	5	Total
Total Reading	Mean	44.9	40.4	38.0	37.6	41.6
	N	355	265	161	78	859
Reading Comprehension	Mean	43.8	36.2	35.4	37.8	39.0
	N	356	265	161	78	860
Total Math	Mean	55.5	42.8	41.0	46.6	49.8
	N	275	139	58	31	503
Math Concepts & Appl.	Mean	45.5	37.3	37.7	39.8	42.0
	N	275	139	58	31	503

Trends

- The Chapter 1 second grade LEP students achieved a mean NCE score above grade level on the SABE Total Math subtest .
- The number of students taking SABE declines at each successive grade level as English proficiency increases over time.

RESEARCH QUESTION 2

What was the performance of the Chapter 1 non-LEP students on the spring, 1990 administration of the Metropolitan Achievement Tests-6 (MAT-6)?

non-LEP Students Mean NCE Scores
MAT-6 Reading and Mathematics

Subject		Grade Level 2	3	4	5	6	Total
Reading Total	Mean	37.4	32.9	41.4	40.2	41.1	38.5
	N	2617	3039	4470	3542	458	14,126
Reading Comprehension	Mean	39.4	34.0	42.6	39.8	41.4	39.4
	N	2628	3042	4488	3554	458	14,170
Math Total	Mean	44.5	41.9	40.4	42.9	38.3	42.0
	N	708	947	1117	1241	246	4259
Math Problem Solving	Mean	43.8	41.8	42.3	40.6	37.9	41.7
	N	709	950	1119	1241	246	4265

Trends

- All of the mean NCE scores on the MAT-6 subtests fell below grade level.
- Overall, scores were somewhat higher for the mathematics subtests. This is consistent with past findings.

RESEARCH QUESTION 3

Were there differences between the Schoolwide non-LEP students and the non-Schoolwide, non-LEP students in their MAT-6 reading and mathematics scores at grade levels 2 through 5?

The following tables present the results of the ANCOVA comparisons between the non-LEP Chapter 1 Schoolwide students and the non-LEP non-Schoolwide students.

Non-LEP Students Analysis of Covariance
MAT-6 Reading

Subject		Grade Level 2	3	4	5	Total
Schoolwide Reading Total	Adjusted Mean	34.4	32.8	40.1	39.5	37.6
	N	624	1124	1592	1289	4629
non-Schoolwide Reading Total	Adjusted Mean	35.9	32.1	41.4	39.1	37.9
	N	945	1572	2500	1812	6829
	F-ratio	4.8*	2.6	2.1	1.0	1.7
Schoolwide Reading Comprehension	Adjusted Mean	36.4	34.0	42.2	38.8	38.4
	N	624	1124	1592	1289	4629
non-Schoolwide Reading Comp	Adjusted Mean	38.3	33.1	42.6	39.0	38.9
	N	945	1572	2500	1812	6829
	F-ratio	6.4*	3.3	1.4	0.4	3.6

*$p \leq .05$

RESEARCH QUESTION 3 (continued)

Non-LEP Students Analysis of Covariance
MAT-6 Mathematics

Subject		Grade Level 2	3	4	5	Total
Schoolwide Mathematics Total	Adjusted Mean	42.2	41.1	39.4	42.9	41.4
	N	503	642	832	905	2882
non-Schoolwide Mathematics Total	Adjusted Mean	48.5	42.0	43.9	42.8	43.7
	N	133	222	205	281	841
	F-ratio	12.9*	0.5	19.3*	0.01	15.1*
Schoolwide Math Problem Solving	Adjusted Mean	42.1	41.1	41.9	40.8	41.4
	N	503	642	832	905	2882
non-Schoolwide Math Problem Solving	Adjusted Mean	46.9	41.8	43.8	40.0	42.6
	N	133	222	205	281	841
	F-ratio	8.4*	0.4	3.3	0.7	4.8*

*$p \leq .05$

Trends

- On the MAT-6 reading subtests, the only significant differences were found at the second grade for both the Reading Total and Reading Comprehension subtests. The adjusted means for the non-Schoolwide schools were higher than those achieved at the Schoolwide schools.
- On the MAT-6 Mathematics Total subtest, the adjusted means for the non-Schoolwide schools were significantly higher at grades two and four, as well as for the comparison between the schools across grade levels.
- On the MAT-6 Math Problem Solving subtest, the adjusted means for the non-Schoolwide schools were significantly higher at the second grade and for the comparison between the schools across grade levels.

RESEARCH QUESTION 4

Were there differences between the Schoolwide LEP students and the non-Schoolwide LEP students in their SABE reading and mathematics scores at grade levels 2 through 5?

The following tables present the results of the ANCOVA comparisons between the LEP Schoolwide students and the LEP non-Schoolwide students.

LEP Students Analysis of Covariance
SABE Reading

Subject		Grade Level 2	3	4	5	Total
Schoolwide Total Reading	Adjusted Mean	43.7	41.1	38.4	36.9	41.0
	N	110	86	48	39	283
non-Schoolwide Total Reading	Adjusted Mean	45.5	39.0	38.4	38.4	41.8
	N	222	139	101	39	501
	F-ratio	1.1	1.7	0.0	0.4	0.6
Schoolwide Reading Comprehension	Adjusted Mean	42.4	36.6	35.0	33.4	38.2
	N	110	86	48	39	283
non-Schoolwide Reading Comp	Adjusted Mean	44.3	35.0	36.0	34.2	39.2
	N	222	139	101	39	501
	F-ratio	1.1	0.9	0.4	0.1	1.1

RESEARCH QUESTION 4 (continued)

LEP Students Analysis of Covariance
SABE Mathematics

Subject		Grade Level 2	3	4	5	Total
Schoolwide Total Mathematics	Adjusted Mean	53.3	41.4	39.1	46.3	47.0
	N	125	73	35	26	259
non-Schoolwide Total Mathematics	Adjusted Mean	58.2	43.3	45.6	46.6	53.6
	N	135	54	15	4	208
	F-ratio	3.7	0.3	3.2	0.0	12.9*
Schoolwide Math Concepts & Appl	Adjusted Mean	43.3	36.2	35.2	39.2	40.2
	N	125	73	35	26	259
non-Schoolwide Math Concepts & Appl	Adjusted Mean	48.3	37.5	45.5	42.3	44.8
	N	135	54	15	4	208
	F-ratio	4.7*	0.3	6.4*	0.3	8.7*

*$p \leq .05$

Trends

- On the SABE reading subtests, no significant differences were found between the adjusted means for the Schoolwide and non-Schoolwide schools.
- On the SABE Mathematics Total subtest, no significant differences were found between the adjusted means for the Schoolwide and non-Schoolwide schools at grades two through five. The adjusted mean across grade level for the non-Schoolwide schools was significantly higher than the adjusted mean for the Schoolwide schools.
- On the SABE Math Concepts and Applications subtest, the adjusted means for the non-Schoolwide schools were significantly higher at the second and fourth grades, and also across grade levels.

RESEARCH QUESTION 5

What were the mean NCE gain scores in reading and mathematics for the non-LEP Chapter 1 students?

The following table presents the mean NCE gain scores in reading and mathematics for the non-LEP Chapter 1 students.

Non-LEP Students
MAT-6 NCE Gain Scores

Subject	Gain	Grade Level 2	3	4	5	6	Total N
Reading Total	Mean	6.4	-1.5	8.9	3.6	3.9	4.5
	N	1569	2696	4092	3101	414	11,872
Reading Comprehension	Mean	3.1	-2.1	9.3	1.4	4.4	3.7
	N	1569	2696	4092	3101	414	11,872
Math Total	Mean	12.0	8.0	8.1	7.6	4.6	8.3
	N	651	887	1052	1206	243	4039
Math Problem Solving	Mean	11.7	5.8	9.8	3.2	4.0	6.9
	N	651	887	1052	1206	243	4039

Trends

- The Chapter 1 non-LEP students attained mean NCE gain scores which were greater than zero on all but the third grade Reading Total and Reading Comprehension subtests of the MAT-6.

RESEARCH QUESTION 6

What were the mean NCE gain scores in reading and mathematics for the LEP Chapter 1 students?

The following table presents the mean NCE gain scores in reading and mathematics for the LEP Chapter 1 students.

LEP Students
SABE NCE Scores

Subject	Gain	Grade Level 2	3	4	5	Total N
Total Reading	Mean	13.6	3.2	-0.4	2.1	6.8
	N	332	225	149	78	784
Reading Comprehension	Mean	9.7	2.1	2.1	1.9	5.3
	N	332	225	149	78	784
Total Math	Mean	18.8	4.3	4.9	7.5	12.7
	N	263	128	50	31	472
Math Concepts & Appl	Mean	3.1	4.7	6.0	2.8	3.8
	N	263	128	50	31	472

Trends

- The Chapter 1 LEP students attained mean NCE gain scores which were greater than zero on all but the fourth grade Reading Total subtest of the SABE.

RESEARCH QUESTION 7

What percentage of non-LEP Chapter 1 students attained an NCE gain score greater than zero on the reading and mathematics subtests of the MAT-6?

The following table presents the numbers of non-LEP Chapter 1 students attaining NCE gain scores greater than zero in reading and mathematics.

Percent of Non-LEP Students With MAT-6 NCE Gain Scores Greater Than Zero

Subject	Percent	Grade Level 2	3	4	5	6	Total N
Reading Total	%	64.5	38.9	84.3	56.2	63.8	63.3
	N	1012	1050	3448	1744	264	7518
Reading Comprehension	%	54.6	38.9	79.4	49.2	65.2	58.5
	N	856	1049	3248	1525	270	6948
Math Total	%	71.4	67.3	71.9	69.0	60.9	69.3
	N	465	597	756	832	148	2798
Math Problem Solving	%	74.3	64.4	74.7	58.8	56.8	66.6
	N	484	571	786	709	138	2688

Trends

- Except for both of the reading tests at the third grade level, at least 50% of the Chapter 1 non-LEP students attained gain scores greater than zero on the MAT-6 subtests. For a student below grade level, a positive gain score indicates movement toward or even beyond the mean of the normative group for the norm-referenced test.

RESEARCH QUESTION 8

What percentage of LEP Chapter 1 students attained an NCE gain score greater than zero on the reading and mathematics subtests of the SABE?

The following table presents the mean NCE gain scores in reading and mathematics for the LEP Chapter 1 students.

Percent of LEP Students With SABE NCE Gain Scores Greater Than Zero

Subject	Percent	Grade Level 2	3	4	5	Total N
Total Reading	%	81.9	56.9	50.3	53.8	66.0
	N	272	128	75	42	517
Reading Comprehension	%	69.9	55.6	61.7	52.6	62.5
	N	232	125	92	41	490
Total Math	%	79.8	58.6	66.0	77.4	72.5
	N	210	75	33	24	342
Math Concepts & Appl	%	53.6	64.1	70.0	61.3	58.7
	N	141	82	35	19	277

Trends

- At least 50% of the Chapter 1 LEP students attained gain scores greater than zero on the SABE subtests at all grade levels. For a student below grade level, a positive gain score indicates movement toward or even beyond the mean of the normative group for the norm-referenced test.

RECOMMENDATIONS

As a result of this study, the following recommendations are offered.

- The gain scores analyses indicate that, overall, the Chapter 1 program has been successful in helping academically disadvantaged students to "close the gap" between themselves and the non-Chapter 1 student population. The use of TEA Improvement Plan data for individual schools will help to produce changes at those schools where test score gains lag behind the Chapter 1 program as a whole.

- The comparison of the Schoolwide and non-Schoolwide programs indicate that the Schoolwide approach was no more effective than the non-Schoolwide approach. The 1989-90 school year was the first year in which the Schoolwide approach was implemented in HISD. It is recommended that the individual campus plans be reviewed and modified to incorporate evaluation findings from the 1989-90 academic year.

- It is recommended that Service Roster development and collection procedures be modified to lower the error rate and to simplify the record keeping duties of school personnel.